



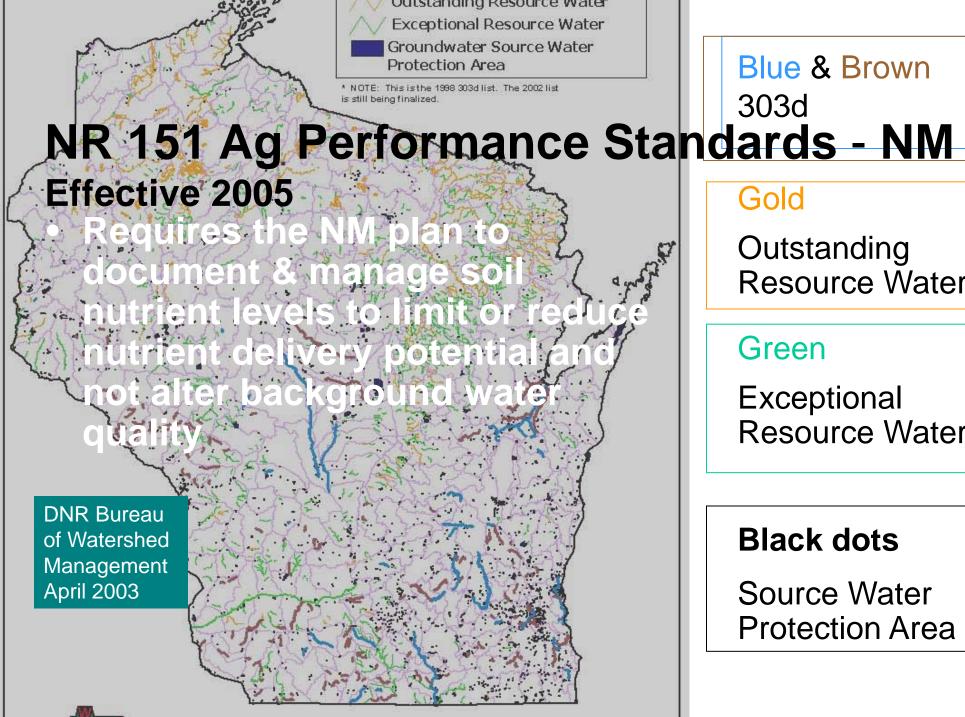
- 1997 Wisconsin Act 27
  - legislature mandated a redesign of non-point pollution programs
- State Statute 281.16
  - DNR set Ag Performance standards (NR 151)
  - DATCP set technical standards (ATCP 50)
- State Statute 92.05
  - DATCP develops a statewide nutrient management program (ATCP 50)

## Needing 590 P based plans

- EQIP USDA NRCS cost share program
- NR 243 WPDES permit CAFO regs
- NR 151 Water quality performance standards
- ATCP 51 Sets statewide livestock siting standards
- ATCP 50 Incorporate P-based 590 standard
- ATCP 40 Fertilizer distribution of manipulated manure will need a license, exempt from tonnage fee if going to fields complying with ATCP 50.04

## **General Nutrient Management**

- Apply nutrients according to annual NM plan using UW soil test recommendations, with soils tested every 4 years
- ATCP 50 requires plans prepared by qualified planner for mechanically applied nutrients
  - add a P based standard reviewed at public hearing
  - add manure analysis from laboratories participating in Manure Analysis Proficiency (MAP)
- ATCP 50 entitles farmers not complying to 70% cost sharing. Plans required under siting or manure storage ordinance or farmland preservation program no cost share required



Blue & Brown 303d

### Gold

Outstanding Resource Water

#### Green

Exceptional **Resource Water** 

#### **Black dots**

Source Water **Protection Area** 

### Proposed 2004 Nutrient Management Std. 590

#1 Nutrients shall not runoff the field during application

### Do not apply nutrients to:

- ▶ fields eroding more than "T" (tolerable soil loss)
- established concentrated flow channels
- non-farmed wetlands
- non-harvested permanent vegetative buffers
- ► lands where vegetation is not removed, except est. & maintenance or in an emergency situation
- ➤ 50' of potable drinking water wells
- within 200' upslope of direct conduits to groundwater such as wells, sinkholes, gravel pits, surface fractured bedrock, *tile inlets*, unless incorporated in 72hrs

## **Proposed 2004 Std. 590 Application Restrictions**

### When frozen or snow covered soil prevents effective incorporation

- No N & P commercial fertilizer applications to frozen soils (except for grass pastures & on winter grains)
- Do not exceed P removal (liquid manure 7000 gallons/ac)
- Do not apply within SWQMA
- Do not apply nutrients to locally identified areas delineated in a conservation plan as contributing runoff directly to surface or groundwater
- Do not apply to slopes > 9 %, except up to 12% if contoured or contour stripped

# Proposed 2004 Std. 590 Application Restrictions Non-Frozen soil in a SWQMA

Use one or more of the following practices:

- 1. Maintain permanent vegetative buffers
- 2. Maintain 30% crop cover on the soil surface after application
- 3. Incorporate nutrients in 72 hours
- 4. Establish fall cover crops promptly after applications

# Proposed 2004 Std. 590 Application Restrictions Non-Frozen soil within SWQMA

Table 1.

Max. Unincorporated Liquid Manure Application Rate on Unsaturated Soil

	Dry soil rate gal./ac.	Dry soil rate gal./ac.	Wet soil rate gal./ac.	Wet soil rate gal./ac.	
% Crop Residue Cover	>30%	<30%	>30%	<30%	In Field Wet Soil Description Upon Squeezing
Fine soil texture	10,000	6,000	5,000	3,000	Easily ribbons out between fingers has slick feeling
Medium soil texture	15,000	10,000	7,500	5,000	Forms a ball, is very pliable, slicks readily
Coarse soil texture	20,000	14,000	10,000	7,000	Forms weak ball, breaks easily

# Proposed 2004 Std. 590 N Restrictions

Follow UW soil test recommendations or N uptake by legume crops - It is acceptable for available N to be up to 20% more than the recommended N rate when legumes and manures are used to meet the entire N requirement. Credit all starter N beyond 20 lbs./ac for corn.

Limit N applications in the summer and fall on high permeability soils, or soils with less than 20 inches to bedrock, or soils with less than 12 inches to apparent groundwater, and within 1,000 feet of municipal wells

Apply remaining crop N need in spring or summer

# Proposed 2004 Std. 590 N restrictions on special soils

50°F or less in the fall -- Limit available manure N to 120 lbs. / ac

> 50°F in the fall -- Pick one

Limit available manure N to 120 lbs. / ac + nitrification inhibitor

Limit manure applications to crop N need or 120 lbs. ac + on perennial or fall seeded crops

Limit available manure N to 90 lbs. / ac + apply after Sept. 15th

No fall commercial N -- except 30 lbs. / ac or less on fall seeded crops

On irrigated fields -- split or delay commercial N to apply majority after crop establishment or use nitrification inhibitor

## **Proposed 2004 Std. 590 General P Restrictions**

Where manure, organic byproducts, or fertilizers are applied:

- Non-starter commercial P shall not be applied where tests are above non-responsive range for the crop
- Avoid building soil test P levels beyond optimum soil test soil test
- Establish perennial cover in all areas of concentrated flow identified in conservation plan

# Proposed 2004 Std. 590 General P Restrictions

### Soil Test P Management

- As soil test P increases applications are restricted
  - When >100 PPM P apply 25% less than the cumulative crop removal over a maximum of 4 yrs
- In crop fields with ephemeral erosion
  - Leave 30% residue /vegetation surface after planting or
  - Establish fall cover crops, contour strips, buffer strips, or filter strips along water ways

### P Index

- Estimates P delivery risk target 6 or less
- Requires computer software to calculate

### 2004 Status of Nutrient Management

1,449 planson 650,963 acin fertilizersurvey

■ Farms practicing NM & not in programs

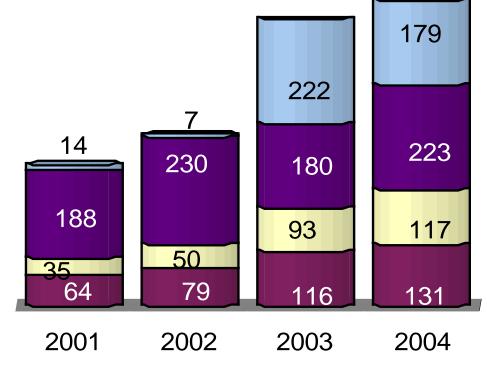
in thousands of acres

7% of WI crop acres

Cost SharingPrograms

■ WPDES

■ County Ord.



total reported acres

302,070

366,581

611,605

650,963



## Websites For Copies

 Review the proposed 590 standard on a farm using SNAP Plus. The web address

http://www.soils.wisc.edu/Snap-Plus/590Test.html

- 590 Nutrient Management Standard July 2002
  - Certified soil testing laboratories
  - Manure Information manure produced & spreader capacity
  - Nutrient Management Plan Checklist (March 1999 & July 2002-590 standard versions and Wisconsin Comprehensive NM Plan Checklist )
- Print these documents and the 590 standards from: <u>http://www.datcp.state.wi.us/arm/agriculture/land-</u>

water/conservation/nutrient-mngmt/planning.html

